SCIENTIFIC AMERICAN.

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THE
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RUFUS PORTER,—Editor.

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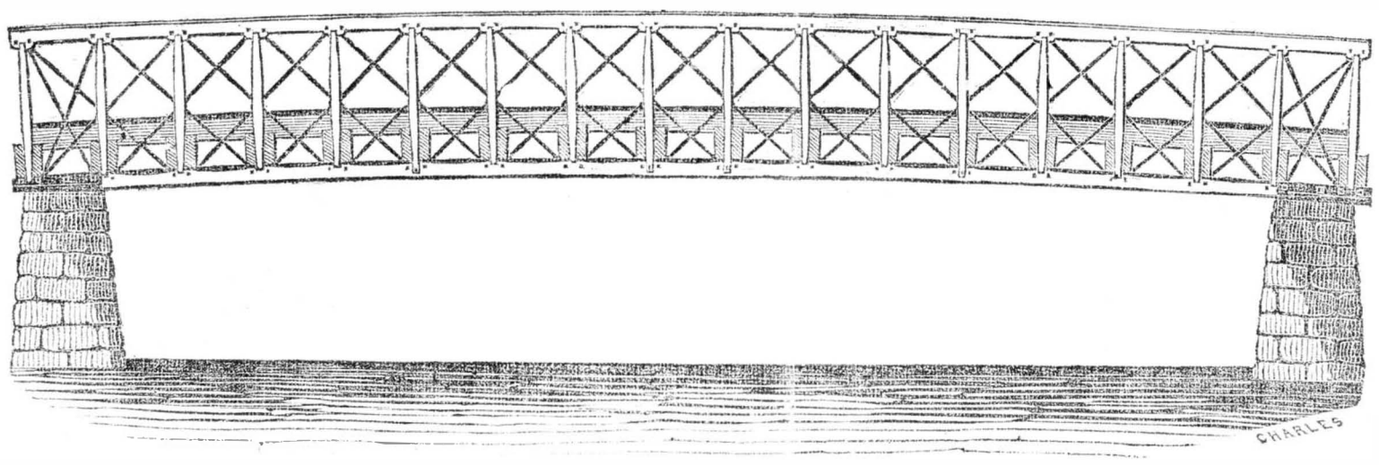
RIDER'S IRON BRIDGE.



EXPLANATION.—This engraving shows a simple elevation of one of the iron truss frames of a span of 40 feet in length, and four feet truss: but this plan may be safely extended to a span of 150 or 200 feet, by elevating the truss in proportion to the length of the span, which would be one foot in depth of truss to every ten feet in length. The Bridge is entirely of iron except the flooring; and the combination of the rails, chords, posts and braces is such, as to combine the entire strength of each in support of the whole. The rails and posts are of cast iron, which comprises full two-thirds of the amount of iron requisite for the Bridge. The diagonal braces are made of the best wrought iron; the chord is composed of two wrought iron plates, laying parallel and edgewise, so as to receive the ends of the braces between them, with a bolt and nut at each angle, passing through the same at top and bottom: the railing and chord are thus firmly supported by means of the posts and braces coming in contact therewith, and thus firmly secured. A model of this Bridge, as represented by the above cut, has been built in this city, and placed on the railroad at 32d street; and its strength has been tested by a heavy locomotive and tender of twenty four tons weight, although the entire quantity of iron used in the construction of the Bridge does not exceed 2 1-2 tons; and it is the opinion of men of judgment in such matters, that this little Bridge will sustain a weight of at least 50 tons. It is evidently a much cheaper bridge in proportion to its strength than can be made of timber, besides being perfectly safe against damage by fire. In the engraving is represented, in addition to the truss-frame, the ends of the flooring timbers, and an elevated railroad track, with which the model bridge now appears. We see no reason to doubt that this Bridge will take the preference for railroad bridges over all others hitherto introduced. For intelligence with regard to terms, &c., application may be made by letter or otherwise, to N. Rider and Sons, New York. Personal application for intelligence may be made at 24 Pine street.

THE DRUMMER BOY OF LUNDY'S LANE.—Major General Winfield Scott, while on the frontier, during the late border difficulties, at a complimentary dinner given him by the citizens of Cleveland, related the following characteristic aneedote that occurred during the battle of Lundy's Lane in the last war:

"In the very midst of the battle, his attention was arrested, by observing at a little distance, where a whole company of riflemen had just been cut down by the terrible fire of the enemy, three drummer boys quarrelling for a single drum, all that was left to them. Soon the two stronger ones went to 'fisticuffs,' while the third quietly folded his arms, awaiting the issue of the contest. At that moment a cannon ball struck the boys and killed them both. With one bound the little fellow caught the drum from between them, and with a shout of triumph, and a loud 'tatoo,' dashed forward to the thickest of the fight.—Said the General, 'I so admired the little soldier, that I rode after him and enquired his name, and directed him to find me at the close of the battle, but I never saw him afterwards.'"

At this moment Mr. ———, one of the most respectable merchants of Cleveland, arose, and with a smile and bow, informed the company that he was the "Drummer boy of Lundy's Lane."

CONNUBIAL FELICITY.—A stout, hearty vender of small wares, of genuine "Jerry Sneak" aspect, made his way into the office, and after peeping cautiously about, as if to be sure some object of dread was not present, walked up to the magistrate, and in an alarmed whisper, said—

"I want to swear my life, your worship."

Magistrate.—Against whom?

Applicant—(Looking about carefully) Against my wife.

M.—What has she been doing?

A.—She's always a beating me. This morning she smacked my face because I put another lump of sugar in my tea, when I thought she wasn't looking.

M.—Well, you know you took her for better or worse.

A.—Yes, but she's all "worse." I think I could manage her if I could separate her from the gin bottle.

M.—Lock it away from her.

A.—She's got all the keys.

M.—Don't let her have any money.

A.—She keeps all the cash.

M.—Part from her.

A.—She won't let me.

"Then," said the magistrate, in a tone of perplexity, "I don't know what to advise. There's only one course—run to America, for that is the land of promise for every rogue, fool, and discontented person here."—*From London Life.*

PAYING LABORERS IN RUSSIA.—In the gigantic establishment of Messrs. Eastwick and Harrison, locomotive and boiler-makers, of St. Petersburgh, 3,500 hands are employed, mostly in the requirements necessary for the construction of railroads in Russia. The plan of paying this enormous multitude is ingenious; on being engaged, the man's name is, we believe, not even asked, bnt he is presented with a medal, numbered; in the pay house are 3,500 wooden boxes, and on presenting himself on Saturday night for his pay, the clerk hands him his money, takes his medal in receipt, which is dropt into the box of its number, and gives him another medal, as a pledge of engagement for the following week. These men are English, American, Scotch, Irish, German and Russian, and amongst whom the strictest discipline is maintained. The owners of this great manufactory were formerly of Philadelphia.

A STORY OF THE WARS.—Signor Paldi, a Piedmontese by birth, is a music master in the infantry band of the 5th Regiment U. S. Troops, and quite a character. He was recently at the mouth of the Ohio, the bearer of letters to Gen. Brooks, and the correspondent of the St. Louis Reveille drums out the following:

Signor Paldi relates an amusing circumstance which occurred to him on the second day. He had yielded up his horse to an officer, mounted himself upon a mule, and was attending at the artillery train, making himself generally useful—music had been laid aside for a time—when one of the enemy's guns commenced playing upon the spot near where he stood. The aim, he said, was bad—the gun would sometimes come near, and again far; at length a shower of canister came, carraying away his canteen, grazing his cap, slightly wounding his foot, and starting his mule off toward a detachment of the enamy's cavalry. He in vain tried to stop his headlong progress, and could not conceive what made him bellow and cut up in such an outrageously frantic manner, when looking behind him, the cause was at once explained—the mule's *tail* had been carried away by a shot! Like a ship without a rudder, he was beating fast on a lee shore, when his ride was forced to shoot him, to stop his progress.

EXCESSIVELY ACCOMMODATING.—A captain justly celebrated for his urbanity, was hailed from the shore between Baton Ronge and New Orleans by an elderly female. The boat was brought to, and the captain with the agility of a squirrel, leaped on land. "Captain," said the elderly lady, as he obsequiously bowed before her, "Captain, my daughter sick in New Orleans, has sent up to me for a dozen of eggs; and I just thought I would call you and request you to carry them down to No——, street. "Certainly madam, certainly," replied the captain. "Captain," said the good dame, I put them in this little basket on some cotton; but as I had only eleven, and the speckle hen is on the nest laying the twelfth, would it be asking of you too much to wait until it should be ready?" "By no means, madam, by no means," answered the obliging captain; and the good lady returned to the house to expedite the egg as soon as it should see the light. The captain sat composedly on a piece of timber, patiently waited until the speckle hen had completed her labors, and the twelfth egg was handed him by a servant.

THE SILENT WOMAN.—Madame Regnier, the wife of a law officer at Versailles, while talking in the presence of a numerous party, dropped some remarks which were out of place, though not very important. Her husband reprimanded her before the whole company, saying "Silence, madam, you are a fool." She lived twenty or thirty years afterwards, and never uttered a word, even to her children! A pretended theft was committed in her presence, in hopes of taking her by surprise, but without effect, and nothing could induce her to speak. When her consent was requisite for the marriage of any of her children, she bowed her head and signed the contract.

SAVE YOUR IDEAS.—Every person who thinks at all, will sometimes conceive a sudden and unusually bright and interesting idea, which in a few seconds will vanish from his mind to return no more forever: and we have known a person to spend hours of labor and study to regain an idea thus suddenly and inadvertantly lost. We would therefore recommend to every person to keep at all times a pencil and piece of paper or card in his pocket, for the purpose of making occasional memorandum of such transient ideas as may to him appear worth preserving. There are few who would not derive an advantage from this practice.

AMERICAN WONDERS.—A Southern paper, in speaking of this subject says: "Two of the greatest natural curiosities, in the world are to be found within the United States and are yet scarcely known to the best informed of geographers and naturalists. The one is a very beautiful waterfall in Franklin county in the state of Georgia; the other is a stupendous precipice in Pendleton district, South Carolina. The Tucco falls is much higher than the falls of Niagara. The column of water is propelled beautifully over a perpendicular rock, and when the stream is full, it passes down the steep without being broken.

The Table Mountains, in Pendleton district, South Carolina, is an awful precipice of nine hundred feet. Very few persons who have once cast a glimpse into the almost boundless abyss, can again exercise sufficient fortitude to approach the margin of the chasm; almost every one looking over involuntarily falls to the ground, senseless, nerveless and hopeless, and would inevitably be precipated and dashed to atoms, were it not for the measures of caution and security that have always been deemed indispensible to safe indulgence to the curiosity of the visitor and spectator. Every one, on proceeding to the spot whence it is usual to gaze over the wonderful deep, has in his or her imagination a limitation, graduated by reference to distances with which the eye has been familiar: but in a moment, eternity, as it were, is presented to the astonished senses, and the observer is instantly overwhelmed. He soon recovers from the first surprise, and in a wild delirium surveys a scene which for a time he is unable to define by description or limitation.

VOLUNTEERING.—It is rumored that some of the volunteers who went to Fort Leavenworth did not find volunteering what it was cracked up to be. When their rations were issued to them in the morning, some of them ate or wasted at breakfast the rations for the whole day, and were much surprised that they had to go hungry at dinner and supper. But a little hungry experience taught them more economy. Some of them were terribly surprised that their food was not cooked for them, and swore they would starve before they would cook; but a few week's service will teach them the fashionable accomplishment of cooking. One young man, who had been clerk in a mercantile house in this city, was found driving a cart from the river to the fort, and was not altogether pleased that he had been put at such work; but he will probably be benefitted by learning the useful business of ox-driving.—*St. Louis New Era.*

SIR ROBERT PEEL'S DEVOTIONS.—It is stated on authority of confidence, says a London paper, that a distinguished Irish law functionary, who is on the most intimate terms with Sir Robert Peel, calling upon him one day, made his way into Sir Robert's study without being announced. Seeing the Premier on his knees, he stood still for a moment, and then, as noiselessly as he could, retreated into the outer apartment. After a short period had elapsed, Sir Robert Peel joined him, and, conscious that he had been discovered remarked: "You were perhaps surprised to find me at prayer; but the truth is dear ——, I find that, in reality, the whole of the affairs of this people is laid upon my shoulders.—I have, therefore, been to the only source of strength for help, and I find it continually requisite, and only to be obtained there."

TO TIN COPPER BY BOILING.—Boil half a pound of granulated tin, and six ounces of super tartrate of potass in three pints of water; when they have boiled half an hour, put in any piece of copper ware, and continue boiling fifteen minutes longer. The copper may then be taken out, and will have been handsomely coated with tin.

Growing Honors.

The following story we find going the rounds of the press:

A few years ago, a friend of ours was out on a fishing excursion, and after the fatigues of the day were nearly endured,—whether with anything more than 'fisherman's luck,' we know not—he entered a public house in a neighboring town for refreshments. He there encountered a garrulous old man, who had done his country some service in the revolution, with whom he fell into conversation. The old man was poor, he said, and expatiated so feelingly upon the inconveniences of his poverty, that our friend, who is always benevolently inclined, was considerably moved. It was not then regarded a sinful thing to drink a glass of toddy, especially upon a fishing excursion, indeed it was a matter almost universally admitted that the fish wouldn't bite unless there was a bottle of black-strap along, and so he asked the old man to drink.

'Thank you *Captain*,' said the old man, and the drinks were despatched.

Our friend had ordered dinner, and when it was ready he invited the old hero to dine with him.

'I declare, *Major*,' said he, 'you are very kind—I don't care if I do.'

After dinner a cigar was handed him, with the request that he would join in a social smoke.

'Well, now, *Colonel*, I do declare you are very generous.'

Conversation went on—the old hero fought his battles over and over again, and was very happy.

'Come my old hearty,' said our old friend, 'let us take a little something more before we part.'

'*General*,' said the old man, 'you are too generous, but as you say I can't refuse a glass at parting.'

Our friend then extended his hand, on taking his leave, and in grasping that of the old hero, he deposited a half dollar? What is that for?'

'Oh,' said our friend, 'It will help you along a little, in the rough journey of life, and I am very glad of an opportunity to do a kindness to one of the men who fought for the liberty we enjoy.'

This was too much for the old man. The tears started to his eyes, and he could only utter, almost choked with emotion—

'God bless you, *Governor?*

ECCENTRIC HOSPITALITY.—During the late American war a soldier who had been wounded and honorably discharged, being destitute and benighted knocked at the door of an Irish farmer, when the following dialogue ensued.

Patrick—And who the divil are you now.

Soldier—My name is John Wilson.

Patrick—And where the divil are you going from, John Wilson?

Soldier—From the American army at Erie, sir.

Patrick—And what do you want here?

Soldier—I want shelter to night; will you permit me to spread my blanket on your floor, and sleep to night?

Patrick—Divil take me if I do, John Wilson.

Soldier—On your kitchen floor, sir?

Patrick—Not I by the Hill o'Howth.

Soldier—In your stable, then?

Patrick—I'm hanged if I do that either.

Soldier—I'm dying with hunger, give me but a bone and crust; I ask no more.

Patrick—Devil blow me if I do sir.

Soldier—Give me some water to quench my thirst I beg of you.

Patrick—Beg and be hanged, I'll do no such thing.

Soldier—Sir, I have been fighting to secure the blessings you enjoy, can you so inhospitably reject me from your home?

Patrick—Reject you; who the divil talked a word about rejecting you? May be I am not the scurvy spalpeen you take me to be, John Wilson. You asked me to let you lie on my floor, my kitchen floor, or my stable; now by the powers, d'ye think I'd let a perfect stranger do that when I have half a dozen soft beds all empty? No, by the Hill o'Howth John, that I wont. In the second place, you told me you were dying with hunger, and wanted a bone and a crust to eat; now honey, d'ye think I'd feed a hungry man on bones and crusts when my yard is full of fat pullets, and turkeys, and pigs? No, by the powers, not I, that's flat. In the third place you asked me for some simple water to quench your thirst; now as my water is none of the best, I never give it to a poor traveller without *mixing* it with plenty of wine, or something else wholesome and cooling. Come into my house, my honey; divil blow me but you shall sleep in the best feather bed I have; you shall have the best supper and breakfast than my farm can supply which, thank heaven, is none of the worst; you shall drink as much water as you choose, provided you mix it with plenty of good wine, and provided also you prefer it. Come in my hearty, come in, and feel yourself at home. It shall never be said that Patrick O'Flatherty treated a man scurvily who has been fighting for the dear country which gave him birth.

POMPOSITY.—A facetious gentleman travelling in the interior of the State, on arriving at his lodging place in the evening, was met by the hostler, whom he thus addressed: "Boy extricate that quadruped from the vehicle, stabulate him, denote him an adequate supply of nutritious aliment, and when the aurora of morn shall again illuminate the oriental horizon, I shall award you a pecuniary compensation for your amiable hospitality." The boy not understanding a word, ran into the house saying, "Master here's a Dutchman wants to see you."

VERY LIBERAL.—A Vermont editor advertises that there are lots of beautiful girls promenading the principal streets of this village, and that any person who will subscribe for his paper and pay in advance, may have the privilege of looking at their pretty faces.

Philosophy for the Times.

Let those who will repine at fate,
And droop their heads with sorrow;
I laugh, when cares upon me wait—
I know they'll leave to-morrow.
My purse is light, but what of that?
My heart is light to match it;
And if I tear my only coat,
I laugh the while I patch it.

I've seen some elves who called themselves
My friends in summer weather,
Blown far away in sorrow's day,
As winds would blow a feather
I never grieved to see them go,
(The rascals, who would heed 'em?
For what's the use of having friends,
If false when most you need 'em?

I've seen some rich in worldly gear,
Eternally repining,
Their hearts a prey to every fear—
With gladness never shining.
I would not change my lightsome heart,
For all their gold and sorrow;
For that's a thing that all their wealth
Can neither buy nor borrow.

And still, as sorrow comes to me,
(As sorrows sometimes will come,
I find the way to make them flee,
Is bidding them right welcome.
They cannot brook a cheerful look—
They're used to sobs and sighing;
And he that meets them with a smile,
Is sure to set them flying.

Simple Affinity.

Some WATER and OIL
One day had a boil,
As down in a glass they were dropping,
And would not unite,
But continued to fight,
Without any prospect of stopping.

Some PEARLASH o'erheard,
And as quick as a word,
He jumped in the midst of the clashing,
When all three agreed
And united with speed,
And SOAP was created for washing.

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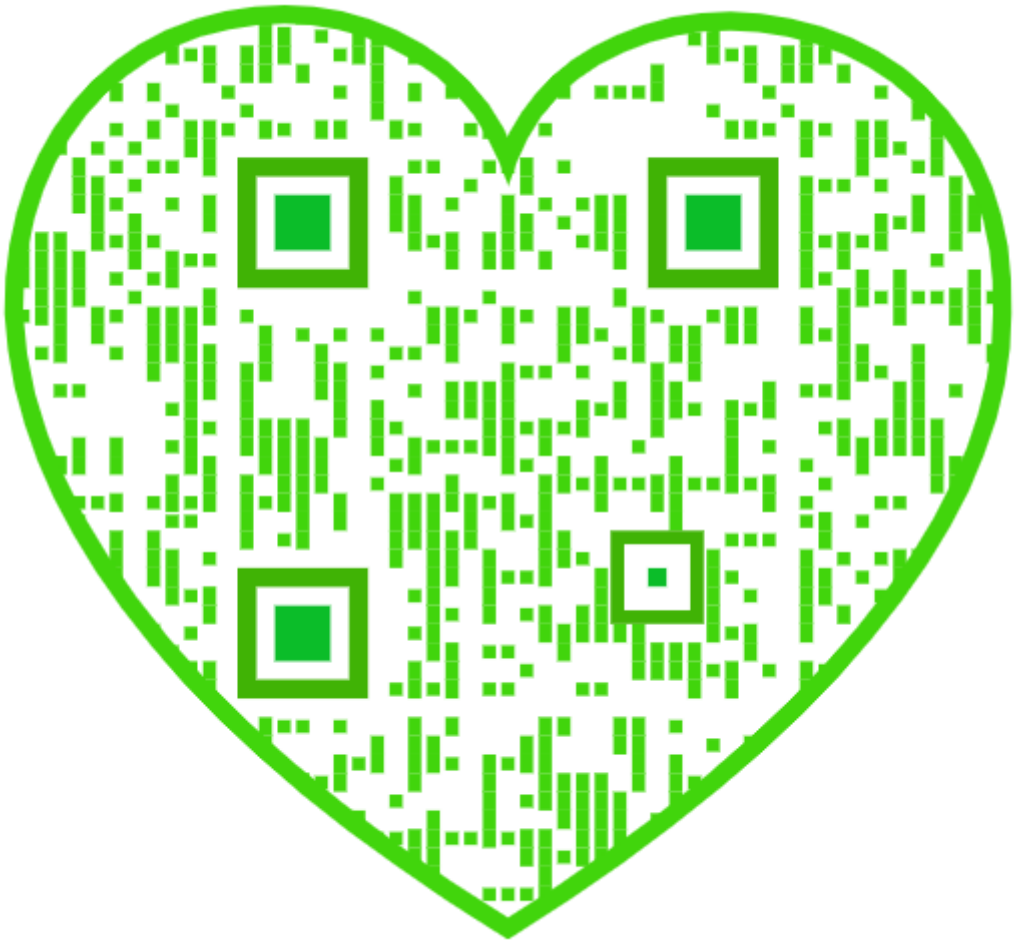
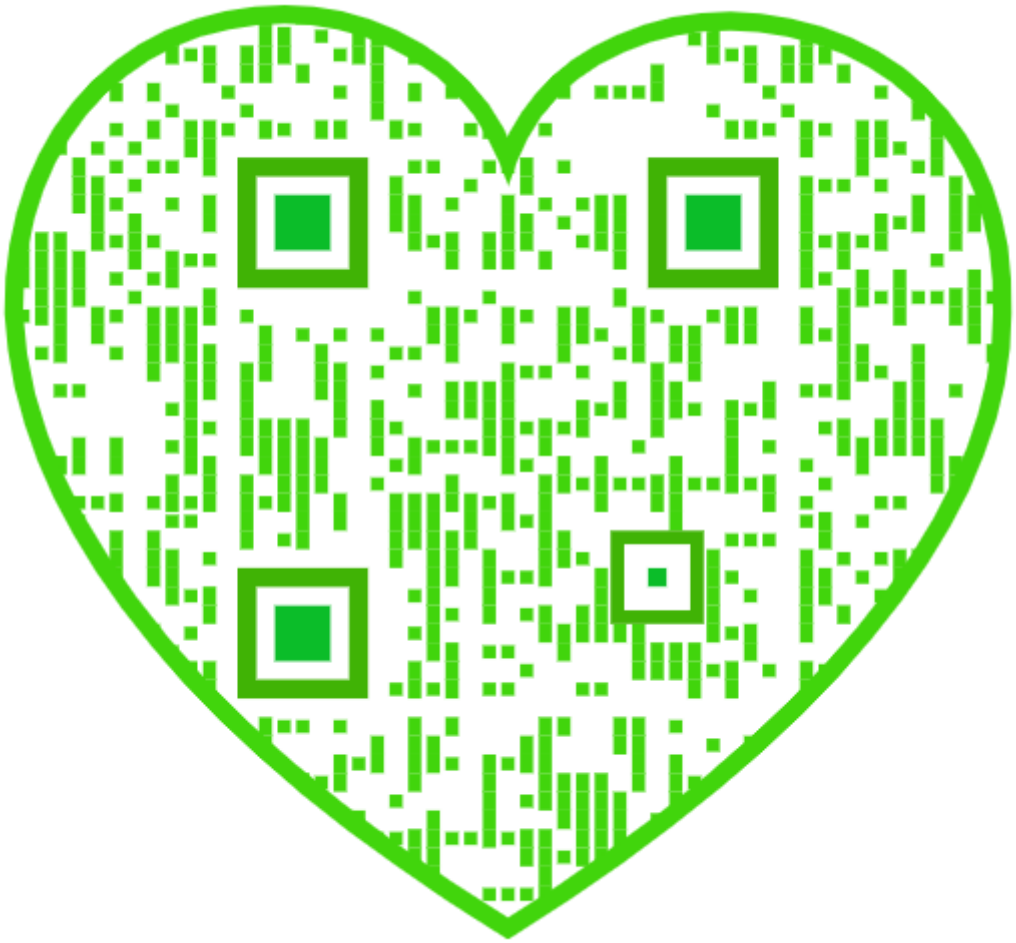




SCIENTIFIC AMERICAN

NEW-YORK, THURSDAY, JULY 30.

Drawings of machinery, engraving on wood, and lithographic drawings, neatly executed, at the lowest prices, at this office.

POST MASTERS—Who receive this paper, will confer a special favor by mentioning the subject occasionally to scientific mechanics. The aid, also and influence of all our kind patrons, in extending the notice and circulation of this paper, is most respectfully solicited.

ALEXANDER SLIDEL MACKENZIE.—It was rumored some weeks since, that this personage had been charged with a mission to Santa Anna. In allusion to this rumor the Boston Courier remarked "For the honor of our country, and for the general cause of humanity, we hope he is not vested with any official capacity by the government. We rather hope he is gone as a volunteer hangman. Santa Anna might find him a useful copartner, if that blood-gorged chieftain has, as is supposed, a design of once more making himself dictator of Mexico." We would enquire, by the way, what has become of the sword for which the gallows loving aristocracy of Boston subscribed, to be presented to Mackenzie as a token of regard for his courage displayed in hanging three helpless and probably innocent men of his crew? Such patriotism should be remembered; and he will probably need the sword, though we have never heard of its presentation.

A DAY AFTER THE FAIR.—Some fifteen years since, we made some strenuous exertions to get up a new steamboat for the navigation of the Merrimac river, running between Boston, Newburyport, and Haverhill, Mass. But the project being deemed impracticable by the citizens of those places, and meeting with no encouragement, was abandoned. But now, when the demand or need of such an accommodation has been nearly superseded by an excellent railroad, a new steamboat has been built and put in operation on this river, and meets with no difficulty in the navigation. Thus tardy is the progress of improvement in many instances, on account of the stupid apathy of those who should encourage it.

FROM THE ARMY.—Matamoras dates up to July 8th have been received. Gen. Taylor had ten steamers at Matamoras with which to ascend the Rio Grande to Reynosa, on his way to Monterey. The number of his troops must by this time amount to about 16,000. The Mexicans were much alarmed by the firing of cannon in celebration of the 4th. Another paper, the "American Flag," has been commenced at Matamoras. The Spanish paper originally published at that place is now printed entirely in English.

IBRAHIM PACHA.—This Egyptian Prince, who is now on a visit to England, recently visited several of the great workshops in Birmingham, and among them the glass manufactory, a large establishment, which employs 350 persons; has 44 pots, consumes 150 tons of coal a week, and manufactures upwards of three million lbs. of glass per annum. His Highness very quietly lit up his tobacco roll at a piece of red hot glass fuse, and while the Mayor and other visitors were obliged to keep a respectable distance, he stood the heat like a Salamander.

NATURAL PHILOSOPHY.—People often complain in the summer season, that the atmosphere is exceedingly and oppressively warm; yet if that same warm atmosphere is put into a rapid motion, thus constituting wind, it is considered comfortably cool and refreshing. The difference in the effect, is not occasioned by any difference in the temperature of the air, as people generally suppose, but is in consequence of the immediate removal of the animal heat which emanates from the body of a person, and is thus prevented accumulating in the immediate vicinity, and becoming thus oppressive.

THE COLUMBIAN MAGAZINE.—The August number—being No. 2 of vol. 6—appears in splendid style. One of its three embellishments, the fall of Major Ringgold, is one of the finest and most perfect mezzotints, ever published in this city, and is alone worth the price of the number. The other embellishments also are rich. Each number of this work contains 48 pages of first rate original prose and poetry. Published by Israel Post, 140 Nassau street. Terms, $3 per annum.

MECHANICS' TOOLS.—We would again remind our readers that they may find a very extensive, not to say perfect, variety of mechanics' tools of excellent quality and very low prices, at the corner of Chamber and Chatham streets. Mechanics from the country, who visit this city for the purpose of purchasing tools, or any variety of hardware, may obtain better bargains at Rowntree's, than elsewhere in the city.

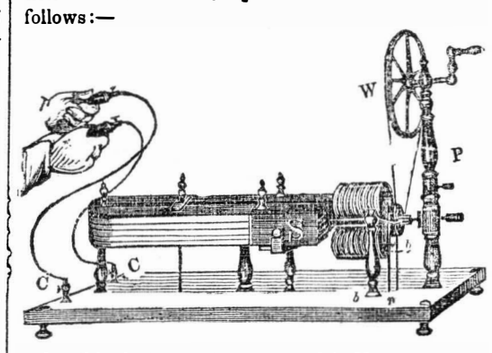
PHONOGRAPHY.—We shall defer this subject till our next number, deeming it inexpedient to give too frequent lessons, lest those who are learning the art should not sufficiently practice on each lesson in its place.

FORTUNE CORRECT FOR ONCE.—Mr. Wm. Applegate, an industrious and enterprising printer, of 16 Ann street, has become the proprietor of the handsome sum of $60,000, left him by a gentleman in Europe.

A SLIGHT BLUNDER.—On the subject of wide guage railroads in our last number, 9th line, instead of 4 feet 10 inches, as it was written, our types made it read "8 feet 10 inches," which had the effect to make beautiful nonsense of the sentence.

Magneto Electricity.

A powerful current of electricity may be produced mechanically by means of a permanent steel magnet of the U form, and on the principle that when an armature, or any piece of soft iron is brought in contact with one or both of the poles of a permanent magnet, it becomes itself magnetic by induction, and by its reaction adds to the power of the magnet. On the contrary, when it is taken away, it diminishes the power of the magnet. The approach and departure of the iron, therefore, from the poles of a magnet, alters its magnetic state, and tends to induce a current of electricity in a helical coil surrounding the iron. This principle is improved with advantage by means of the magneto electric machine, represented and described as follows:—



In this instrument, a powerful U magnet is mounted on a stand; and in front of its poles is an armature resembling a U armature, but for convenience the iron instead of being curved, is bent at right angles; and each pole of the armature is wound with a coil of fine insulated wire, as seen at A; the two coils being so connected as to act as one. The armature does not quite touch the magnetic poles, and is mounted on a revolving axle, extending from the post P to the central support of the magnet. By means of a multiplying or band wheel W, which is connected by the band with a pulley on the axle, the armature may be made to revolve rapidly, so that the end of the armature which was at one instant opposite to the north pole of the magnet, will be the next instant opposite to the south pole, and vice versa. A rapid reversal of the magnetism of the armature thus takes place, and electric currents are exerted in the surrounding wire. The axle is furnished with a pole changer, consisting of two semi-cylinders insulated from the axle; and to these, the two ends of the coiled wire which surrounds the armature are soldered. Two flattened silver wires *b*, *b*, are so placed as to press against the opposite sides of the pole-changer, and are connected under the base board with the cups C, C. One pole of the armature, in leaving the north pole of the magnet and approaching the south pole, induces electricity in one direction, but when it passes the south pole again and approaches the north pole, it produces a current in the opposite direction; and by means of the pole changers above described, this changing current is reduced to a continuous current in a circuit formed between the two binding cups; the effect of the pole changers being to change the end of the coil which communicates with either cup, every half revolution. The current induced by this machine, may be applied to the purpose of electroplating, or communicating telegraphic intelligence; and by a slight modification of the machine by connecting one of the wire springs *b b*, with the post P, and the other with the pillar *p*, with a wire extending therefrom to the break-piece, powerful shocks may be felt by a person who may hold the brass handles, as represented in the engraving.

SUBMARINE TELEGRAPHS.—We are not yet satisfied of the impracticability of extending telegraphic communications through broad rivers at the bottom of the water. Mr. Colt has succeeded in carrying the marine telegraph across the East River, even in a leaden pipe, which must, in the nature of the case, prove somewhat detrimental to the communicating current; it being an established principle, that when an electric current passes in the vicinity of any parallel metallic substance, unless they are connected at some point, an opposite current is induced therein, which reduces in some measure the strength of the primary current. Having given much attention to this subject, and availed ourselves of other people's experience, we shall venture to propose what we believe to be the best method for that purpose. Let three several wires of ordinary size, and well insulated, be united at the ends, and the three enclosed in strips of flannel wrapped round them, and this enclosed in strips of cotton cloth. Cover this with a mixture of rosin and beeswax to the depth of half an inch, applying this composition while hot, with a paint brush. Swathe this with cotton cloth, and varnish over the cloth with India rubber. Attach to this a sufficient number of rings of lead to sink it to the bottom, and let it cross the river at a place where vessels do not frequently drop their anchors. A conductor thus prepared, will be sufficiently elastic or pliable to admit of being coiled on a large drum, from which it may be reeled off from a boat when required to be placed in line, and the expense thereof will be trifling in proportion to its utility.

INTERESTING EXPERIMENT.—Iodine being heated, evaporates or sublimates into a dense violet colored smoke or vapor. Put a few grains of it into a large phial and slightly insert the stopper: hold the bottom of the phial over the flame of a lamp, and it will soon be filled with the vapor and appear of a violet color; but when cold, the vapor will condense again into a dark blue powder. The experiment may be repeated many times with the same article.

RAILROAD VS. CANAL.—The estimated cost of a ship canal across the Isthmus of Panama, is twenty-five millions of dollars. A ship railroad, on which vessels may be conveyed with greater safety, and tenfold facility, may be constructed for one tenth part of that sum. The project for a railroad should be abandoned.

Railroad Intelligence.

HARTFORD AND FARMINGTON RAILROAD.—The Hartford people are moving for the construction of a railroad from that city to Farmington valley. The plan is, to use the Hartford and New Haven railroad for about 7 miles, and thence construct an offset to Plainville, or Bristol basin, on the Farmington canal. The length of new road required to be made, is only about 7 miles, and the estimated cost $150,000. $100,000 of the stock was subscribed at Hartford on the first day that the books were opened.

NORTH ADAMS BRANCH R. R.—The new road from Pittsfield, Ms., is progressing rapidly. The grading of the whole route will be completed in a few days; the timber for the ties is all cut, and the rails on their way. The laying of the rails will soon be commenced, and the road pushed forward to completion with all possible despatch. This *branch*, as it is now called, will probably become a section of one of the principal roads in the country,—the main line between New York and Bennington, Vt., via the Housatonic R. R.

LEXINGTON RAILROAD.—The rails are now being laid on the last section of this road, and the cars are expected to commence running from Lexington to Charlestown early in August. The rails on this road are of peculiar construction, being round or swelled on the face, which is considered an improvement.

CHESHIRE N. H. RAILROAD.—After much discussion and hesitation, the Commissioners have decided to terminate this road at Bellow's Falls, where it will meet the Rutland Vt. railroad.

THE PLEASURE OF EDITING.—Who but an editor can know the pleasure enjoyed by the knight of the quill, in the exercises of the privileges of his vocation? At midnight, in his snug and peaceful sanctum, while most of the world are snoozing in sluggish confines of Morpheus, and the rest are enslaving themselves to Bacchus, or pursuing a course of revelry which they are aware will as surely be succeeded by and guilt, as a brilliant fire is succeeded by black cinders and ashes, then it is that the editor feels and enjoys the consciousness of his priviledge, his importance and his power. He is then in high authority and is in verity one of the principal rulers of the world. He can then speak to the minds of thousands and tens of thousands of his fellow beings, and exercise an influence on each, by the presentation of facts and reason, greater than that of a resolution, or an act of the Congress of the United States, with the confirming signature of the President. An editor places on the table before him, a fact or sentiment, portrayed in its full, rational colors, with its lights and shadows:—The next day and while its author, perhaps is enjoying sweet repose, the article is read by thousands and copied into ten other papers, and is eventually brought to the eyes of millions, carrying conviction unopposed, and thus becomes a law, more permanent and effectual than could be made by our General Government, or a decision of the Supreme Court of the United States. Again, does an Editor wish to make the world laugh, he writes an *odd comical*—would he excite an universal sympathy on any subject, he writes a pathetic article, showing up the most affecting incidents of the case. When he becomes weary or fatigued in mind, he partakes of a cup of coffee or young hyson, followed by a few puffs of a principe, by which time he has another brilliant and gay idea, fluttering as it were with impatience to take form on paper, and wing its way through the world, with its merry companions. Such are the pleasures of editing.

COLD WATER TOASTS.—The following toasts were drunk on the 4th, at Richmond, N. H.:

Moderate Drinking—The Devil's Rail road, with a steep downward grade to the Depot of destruction.

The first glass—Satan knocks at your door, and you say, Please Sir, walk in.

Legal Suasion and Moral Suasion—The curry comb and brush, both useful in different ways.

Hard Cider.—Hard every way, but hardest for those who drink it.

Alcohol and Tobacco—The *pipe* to drink and the *pipe* to smoke, make it pretty dear paying the *piper*.

Rum Patriotism and Rum Liberty—The two greatest *Humbugs* of the nineteenth century.

RIVER OF GROG.—At a late fire in Geneva, one of the stores consumed contained upwards of 7000 gallons of alcohol, besides several hogsheads of molasses, most of which was poured into the canal, the water of which became so strong as to burn for some distance below, and exhibited a larger quantity of warm sling than was ever manufactured at one time in the United States.

JEWISH WORSHIP—The Jewish congregation in Elm street have made arrangements to have a regular lecture delivered at least once a month. The "Sabbath Recorder" recommends that they restore the custom which prevailed 1800 years ago, when after the reading of the law and the prophets, the rulers of the synagogue sent unto the visitors, saying, Ye men and brethren, if ye have any word of exhortation for the people, say on.

A HARD CASE.—A young man belonging to Hingham, and on the eve of marriage, came into Boston last week with about $200 of his hard earnings, for the purpose of buying furniture, but while attending an auction for that purpose, was robbed of all his money by a pickpocket.

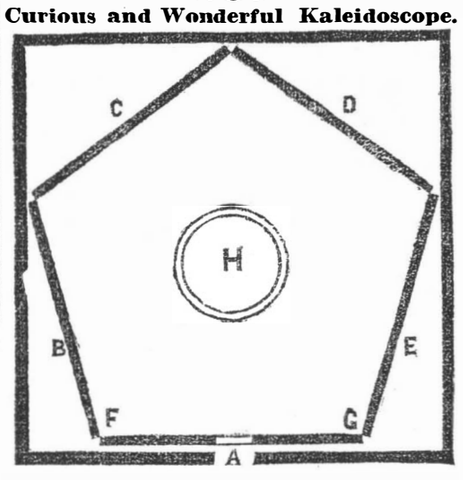
THE BIBLE ADVOCATE.—A weekly paper under this title, has been commenced at Hartford, Ct. From the perusal of the 1st and 2d numbers, we have discovered nothing which appears inconsistent with its title.

POLICY.—The Providence Journal, though strongly in favor of a protective tariff, intimates almost a wish that the bill for its reduction may be passed, as it will, in his opinion, secure the election of a whig President in '48.

The Yankee Turbine Waterwheel.

We are informed that there is a constant and increasing demand for this excellent, cheap and convenient waterwheel, and that those in operation give ample satisfaction. It appears to be particularly calculated for situations in which there is but little fall, say four to six feet. The water being admitted to strike the wheel at four points at the same time, produces great power in proportion to the size of the wheel. Orders directed to the inventor, Mr. Hiram Munger, Chicopee Falls, Mass., will receive due attention. A model may be seen at this office.

Curious and Wonderful Kaleidoscope.



DESCRIPTION.—In a cubical box, about six inches square, place, in a vertical position, five pieces of looking-glass, A B C D and E, so as to form a five angled chamber. Remove the silver or amalgum from a small space in the centre of the glass A, and make a corresponding hole through the side of the box. The top of the box may be covered with transparent paper, which will admit a sufficient quantity of light: or, if it is to be viewed in the evening, two small candles may be placed at F and G. Make a circular hole through the bottom of the box at H, through which any fancy figure may be elevated, so as to appear within, and its position may be changed at pleasure by your hand placed under the box. Put your eye to the hole, A, and you will see the figure, first in the centre, and again reflected in C and D. In D, you will also have the figure with all its movements reflected through B and D; E B and D; C E B D; A C E B D, and this order again repeated, till the view is lost in apparent distance. In C, also, similar views are presented via C E B D A C, &c. The illusion will be found so perfect, that but few people can view it for the first time without some indications of astonishment.

TO ASCERTAIN THE SPEED OR VELOCITY OF MACHINERY.—In all ordinary machinery, the motion of some part thereof is sufficiently moderate to admit of the counting of the revolutions or vibrations thereof. Having compared the motion with time, and ascertained the number of revolutions per minute, of a driving wheel or drum, multiply that number by the quotient obtained by dividing the diameter of this wheel by that of the pulley or pinion which receives motion directly therefrom. But if these two diameters are such that one cannot be divided by the other without a remainder, then reduce each to inches and decimals, and apply the rule of proportion: multiply the diameter of the first wheel by the number of its revolutions per minute, and divide the product by the diameter of the small wheel, pulley, or pinion, and the quotient will show the velocity thereof in revolutions per minute. If another drum or geer wheel is mounted on the shaft of this second rotary, and motion is communicated therefrom to a third axle pulley, the same process may be repeated to ascertain the velocity of the third shaft. In this way the velocity of the mandrills of the most violent motion may be accurately ascertained.

EXCITEMENT AT LEXINGTON, KY.—Lafayette Shelby, who was brought to trial for the cold blooded murder of young Hereni, has been acquitted, though in the face of the most clear and positive evidence; the populace became much exasperated against both Judge and Jury. On the second day after the acquittal, early in the morning, the effigies of Judge Bucknor and the eight Jurors were found *suspended by the neck at the door of the Court house!* The jailor made an attempt to remove them, but was met with such determined resistance that no farther effort was made to take them down. By 10 o'clock a crowd of from 3,000 to 5,000 people assembled in the Court house yard, where violent speeches were made and resolutions adopted condemning the judge and demanding his unconditional resignation. The figures were then taken down and carried in procession through the streets. Upon Judge B.'s effigy a label was affixed —"*The Judge without Justice*," directly over his name in front. Upon the figures of the Jurors were labelled "*bribery, perjury*," &c. A band played the "Rogue's March," and the procession, after traversing the corporate limits, halted in front of the Court House. The effigies were now piled upon each other and consumed by fire, and the excited populace quietly dispersed.

A RARE JOKE.—Sol. Smith, attorney and manager, lately prosecuted a boy for making a row in his theatre at St. Louis. When Smith entered the court, a lad stepped up to him, tendering $5, and requesting Smith to defend him in an action for riot, to which Smith consented. To his astonishment, when the case was called, he found his client to be the very boy he had prosecuted. The boy was cleared.

MORE ECONOMY.—In the established telegraphic tariff, the prices charged are according to the number of words without regard to the length thereof. A Yankee in this city has communicated to his wife in Hartford, that "Mr. Jacob Packmybluecoatwhite pantsandaccountbooksinmysmalltrunk has married Miss Sendthetrunkbynextboatdirectedtomeatnew york."

VARIETY

Items of news transmitted by telegraph, are received at Buffalo ten minutes earlier than the time of starting the communication at Albany; thus travelling the distance in "less than no time."

An enterprising diving-bell company, have returned to Baltimore with upwards of $26,000 in specie, obtained from a wrecked Spanish vessel near New Cumana, on the Main.

Multiply the figure 9 by any other single figure, and the two figures composing the product, added together, will make 9. Thus 9 multiplied by 4, make 36, which two fignres added together, make 9.

Upwards of 80,000 brooms have been manufactured within a year past, at Troy, Wisconsin, for the English market. The munufacturers anticipated having a *brush* with England.

One of the scissorings of the Maine Cultivator says, that "salt must be *constantly kept* in a box for cattle in summer." If the salt is *kept in the box*, we cannot see how the cattle will be benefitted by it.

A piece of stone about the size of a hen's egg, was lately picked up in a field in Chesterfield District, S. C, and being analyzed, it was found to contain 154 pwts. of pure gold.

The number of letters delivered in Great Britain, during the year 1845, was 275,500,000! This shows an increase of about 30,000,000 on the previous year, and produced a revenue of $10,000,000.

Ex President John Tyler was presented by his lady with a fine boy weighing nine pounds, a few days since, at their temporary residence at Easthampton, L. I., as reported by the Brooklyn Star.

The South Hadley (Mass.) Falls Company has recovered $3,033 from the Connecticut River Rail Road Company, in an action for damages, in consequence of the location of said road.

Among the packages of ores which arrived from Sault St. Marie, on the 12th inst., was a mass of pure native copper and silver, weighing upwards of nine hundred pounds.

The Roman Catholics in London appear to have been "rather doubtful" about the ready salvation of the late Pope, and have been holding *high mass* for the repose of his soul.

While most countries are parched with drought, Egypt, in which rain never falls between the months of March and November, was on the 27th of May, deluged by heavy showers.

An army of about forty women in Utica, Mich., lately armed themselves, and proceeded to a bowling alley and demolished the building and all the apparatus. The building was 80 feet long.

The Grand Jury of Concord, Mass., at their recent session, found upwards of seventy indictments against the rummers of that county, for selling liquors contrary to law.

It is stated in the Sandwich (Mass.) Observer, that a shark, measuring 28 feet in length, has been taken in Provincetown harbor, and the skin is to be carried to Cincinatti for exhibition.

A little boy three years old, rambled from his house in Pittsburg, Pa., on the 4th, and wandered in the woods till the next evening before he was found. He had become hoarse by calling Papa.

The most valuable cow in Massachusetts took a stand on the Western railroad, near Clappville, on Friday week. She was caught by the *cow scraper* of an engine, thrown off violently, and killed.

During the burning of a dwelling house in Pottsville, Pa., recently, a child was found in one of the rooms sitting up in the bed and laughing, while the fire was falling round it.

From the single town of Barre, Mass., there are annually exported twelve hundred thousand palm leaf hats, manufactured by the women, ladies, girls, and children of that vicinity.

The reason why the newly elected Governor of Connecticut recommends the repeal of the license law, is that *he himself is engaged in the traffic:* so says the Cataract.

The herds grass in Cumington, Mass., has attained the height of seven feet and four inches, as stated by the Northampton Courier. If it keeps on growing, it will become *tall grass at length.*

New York City contains two hundred and fifteen churches or places of worship, and one hundred and forty eight periodicals, of which ninety one are newspapers.

Miss Kate Pendergrast has taken the veil in the Carmelite nunnery, under the name of Sister Seraphina. They adopt beautiful names at nunneries and some other places.

The Grand Jury of Marshall County, Miss., have indicted a gang of well-dressed loungers, for the purpose of finding out who they are, and how they support themselves. It is an excellent example.

Of the thirty three millions of people in France, twenty seven millions abstain from wine; thirty one millions never eat meat, and twenty millions never wear shoes.

There has been recently an accumulation of specie in the Bank of England, to the amount of *eighty millions of dollars!* and this increase is said to be still steadily gaining.

Gen. Arista has been discharged from his office as Commander, in consequence of his retreat from Matamoras. He has published an address to the soldiers, in which he promises to *pray* for their success.

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An affecting Elegy.

We believe there are very few who can read with attention the following brief narrative and poetry, without some degree of emotion.

"A poor woman, having lost her husband in the war, and having implored relief at several doors in vain, in the town of Liverpool, in a fit of desperation, took her child about three years old, in the public street, and dashed its head against the wall. Immediately surgical aid was called, but in vain. Upon openi g the body of the child, the surgeon gave it as his opinion, that its stomach had not received food for three days before. The miserable mother is committed to Lancaster Castle." The poet represents the mother as saying:

Come, kill the mother who her child has kill'd!
Haste, righteous judges and avenge the deed!
Yes, men of justice, I've for ever stilled
The raging famine that I could not feed.

I murdress! 'tis false; did *I* the murder do?
Say not 'twas *I*, that stained the walls with gore;
Ye hard, unmelting sons of wealth, 'twas *you*.
In vain I wept for succor at your door.

Ye would not let my little cherub live!
Rocks, ye refused to lend it longer breath:
A mother gave it all she had to give—
Gave it a begar'd mother's blessing—death.

Heaven's! how I strove my innocent to save,
'Till my worn spirit could no longer strive,
No more endure to hear the breath I gave
All spent in cries for bread I could not give.

For thee, long days my wond'rous patience bore
Those never to be forgot heart piercing cries;
Bore to behold thy pining looks deplore—
Bore the dumb hunger of thy hollow eyes.

Here, but what wolves, but fierce destroyers dwell?
They tore my husband from my helpless side,
And when the father in their battles fell,
A little bread his famish'd babe denied.

Farewell, thou dreary scene of want and woe!
The poor to dust where hard oppressors grind;
Force seas of blood and seas of tears to flow,
And revel in the torments of mankind.

The Zephyr.

A cooling zephyr took a range
From out his sylvan cell,
One morning in the summer time,
O'er forest, hill and dell,
For he can roam o'er mountain top,
And through the valley free,
His winding way is every where,
His passport liberty.

The forest saw him when afar,
And slightly bowed its head,
The zephyr with its spreading wings,
Just fanned it as he sped
Away to stretch his pinions
Wide o'er the verdant vale,
And sip the perfumes from the flowers,
To scatter in his trail.

Awhile he played amid the flowers,
And in the murmuring rill,
And as he bathed his seraph wings,
It murmured e'en more still,
But soon he bid the rill good by,
And gently flew along,
Rich with the perfumes of the flowers,
And breathing strains of song.

He passed upon the wheat crowned field,
To wave the golden grain,
And fan the happy husbandman,
With all his sturdy train;
To kiss the healthy, rosy cheeks,
Of the lovely maiden there,
And fan the flowing tresses
Of their soft and silken hair.

The noontide heat oppressed him sore,
His strength began to fail,
His wings grew fainter as he passed
O'er mountain and o'er dale;
They bore him to the river,
And he kissed the silver tide,
The caves upon the rocky shore,
A mournful echo sighed.
Fainter grew the gentle sounds,
Until at last they cease,
The zephyr softly sinks away,
And nature rests in peace.

Song.

Banish sorrow, banish grief,
Murmur not when fortune flies;
Sorrow ne'er will bring relief,
Joy from weeping ne'er will rise.
Why should we, with wrinkled care,
Change what nature made so fair?
Let us set the heart at rest,
Of life's troubles make the best.

Busy brains we know, alas!
Let their thoughts at random run,
Like the sand within the glass,
Turning still, and still run on;
Never knowing where to stay,
But uneasy every way.
Let us set the heart at rest,
Of life's troubles make the best.

Some pursue uncertain wealth,
Some to honors high aspire;
Give me freedom, give me health,
That's the sum of my desire:
What the world can more present,
Will not add to my content.
Let us set the heart at rest,
Of life's troubles make the best.

Mirth, when mingled with good will,
Makes the heart alert and free;
Let the snow or rain distil,
All's the same throughout to me:
'Tis no use to war on fate,
Changes daily on us wait.
Let us set the heart ar rest,
Of life's trouble's make the best.

New Inventions.

TIME REGULATED BY ELECTRICITY.—One of the latest exhibitions of the power of the Electric fluid directed by human skill, is now manifested in the regulating, setting, and running of clocks at any distance from each other. It is stated in one of our foreign journals, that "a clock has been so arranged in Edinburgh, by its connection with the magnetic wires, that the oscillations of its pendulum mark the hours on a dial plate in Glasgow, and upon one in Edinburgh, at one and the same moment. So perfect is its operation, that the electric current passes from one city to the other in a point of time not appreciable, and the clocks at the several stations run in perfect unison.

ANOTHER NEW TELEGRAPH.—As was to be expected, since Prof. Morse's deeply scientific projection of electric telegraph has been crowned with success, there have been various new plans projected, each of which claims some peculiar excellence. The latest that we have heard of is by a Mr. Saunders of Cincinatti, and it is called the *whispering* telegraph, and is particularly calculated for delicate and confidential communication. Of course this peculiarity will constitute the lovers' department; and each station must have a room fitted up, to which the young and hopeful may resort to hold precious and tender conversation with particular friends, who reside hundreds of miles distant.

SELF-ADJUSTING CRAVATS.—One of the prettiest improvements on a small scale which we have lately seen, is an elegant and genteel cravat, constructed with internal springs, which uniformly hold the cravat in its place on the neck without any fastening whatever. The principal objection to the use of stocks has been the labor of buckling and adjusting them: but this difficulty is entirely evaded by this invention, which cannot fail of gaining the approbation of all who give it a trial. These cravats may be seen in variety, at No. 25 Courtlandt street.

A HORSE FORK.—This is the name of a new machine said to have been invented by Barrett Brown of Newton, Pa., and applied to unloading hay from a cart and stowing it away into a barn. It is stated that ten tons of hay per hour may be unloaded and stowed away by this machine, which, of course, must be operated by horse power. We very much doubt the existence of such a machine, however, except in the imagination of some would-be-wise newspaper writer.

[Notices of several novel and excellent new inventions, received too late for this number, will appear in our next.]

PERSEVERING AFFECTION.—The accomplished and devoted wife of Capt. Page, of the United States army, as soon as she heard of the terrible wound received by him in the battle of Palo Alto, left the luxuries of home and relatives to hasten to the bedside of her battle scathed husband. She reached New Orleans about four weeks ago, having travelled more than a thousand miles without pausing for an hour's rest. At this place she embarked in the Alabama for Point Isabel. That vessel was dispatched to Mobile for volunteers, where, owing to some difficulty about the term of enlistment, she was detained a week. At the expiration of this time the Alabama returned to New Orleans, and soon after proceeded to Point Isabel: but about the time she arrived at that place, Capt. Page arrived at New Orleans. Mrs. Page returned by the earliest conveyance, and joining her husband at New Orleans, and they proceeded together up the Mississippi; but notwithstanding the most assiduous attention, Capt. Page became exhausted and died on the passage, and his affectionate wife was compelled to return to her lonesome home without him.

LIGHTNING SPEED.—The arrival of the Cambria at Boston on the *evening* of the 17th, was noticed in the Washington papers of the same evening, and in the Buffalo papers of the next morning. If this tremendous engine of intelligence,—the electric telegraph,—does not produce a greater revolution in the newspaper business, than was ever contemplated by the inventor thereof, we shall fail in our conjectures.

TO MAKE WATER COLD FOR SUMMER.—The following is a simple mode of reducing water almost as cold as ice: Let the jar, pitcher, or vessel used for the water, be surrounded with one or more folds of coarse cotton, to be constantly wet. The evaporations of the water will carry off the heat from the inside, and reduce it to freezing point.—*Norway Advertiser.*

'Not as you knows on,' neighbor. Water may in this way be prevented from becoming warm; but nothing short of bathing the jug with sulphuric ether will reduce its contents to the freezing point.

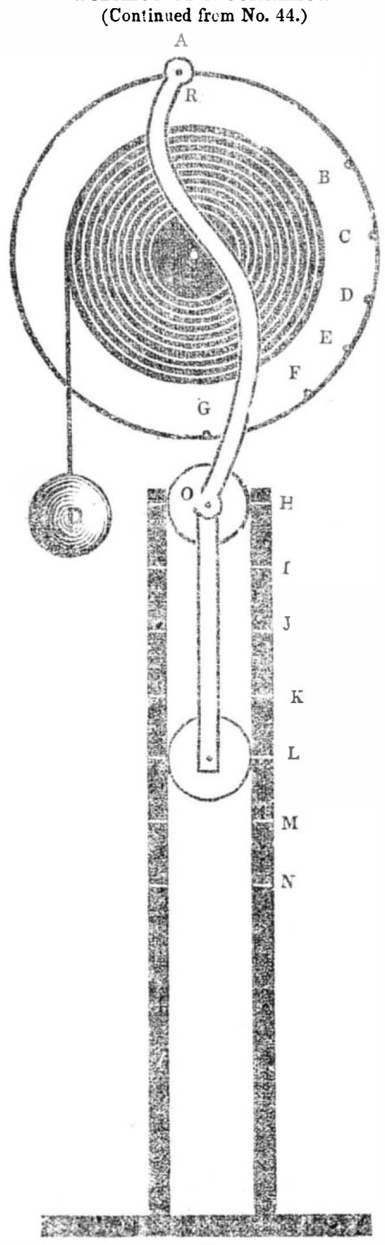
DESTRUCTIVE WARS.—In the crusades, or holy wars, continuing 200 years, 2,000,000 men were killed, beside women and children. At Waterloo more than 50,000 perished. At the battle of Chalons, the number slain was 153,000. The Persian expedition to Greece lost 300,000 men. At the battle of Cannæ, 40,000 Romans were slain. By the will of three military despots, Cæsar, Alexander and Napoleon, six millions of human beings perished. The Inquisition in Spain cost that country at least 2,000,000 lives. St. Bartholomew's massacre cost France 100,000 of her best citizens.

THAT'S A FACT.—The Boston Chronotype says, "If a man stops a paper, which he likes on the whole, on account of some particular opinion advanced in it, it is a certain sign that he is convinced of the soundness of that opinion, but is unwilling to own it.

About three thousand volunteers are on their way from St. Louis to Mexico. Gen. Taylor's troops are in motion.

Science of Mechanics.

(Continued from No. 44.)



THE CRANK MOTION.—This being a subject difficult to illustrate to the satisfaction of those who are accustomed to an erroneous opinion thereon, we are induced to repeat the diagram, and give a different explanation, elucidating the same principles, but by a mode of illustration different from that in our last number. In the engraving, the ball P represents the application of direct and uniform force, while the vertical shackle-bar connected by the pivot A represents the application of an equal force by the crank principle, the weight of the bar and appendages being equal to that of the ball It will be observed that to produce a semi-revelution of the wheel, in which the crank pivot will move from A to G, the wheel O, must descend from H to N, which is precisely the same distance that the ball P must descend to produce an equal movement of the wheel in the opposite direction. What we wish to establish is, that the bars and friction wheels, by descending from H to N, do apply as much power, and exert as much influence in producing a rotary motion in the wheels, by means of the crank principle, as does the ball P, by its application of force direct, in descending an equal distance. We of course admit, that the bars, in the first stage of their progress—from H to I,—and while the crank pivot moves from A to B, do not exert so much direct force on the wheels, as does the weight of the ball P: but this difference is made up by the greater motion of the wheels, during this stage of the progress of the bars. While the bars have descended one foot, the crank pivot has moved nearly three feet, and has actually descended vertically something more than a foot; and after the crank pivot has arrived at B, and during its progress from thence to E, while the wheel O descends from I to L, the weights of the bars have a more powerful direct influence on the motion of the wheels, than that of the ball can have: because the point at which the weight of the bars is applied to the wheel, is farther from the centre of motion than that from which the weight is suspended; and consequently has the advantage of greater leverage. We do not claim any advantage from the change of position of the shackle-bar, on account of the weight thereof: for if we suppose the shackle-bar and friction wheels to be devoid of weight, and a weight equal to that of the ball, to consist in the vertical bar, our position will be equally tenable. The result of the investigation is as before, that the weight of the bars, in each foot of their descent, apply as much power to the wheels, as the weight of the ball can do by descending an equal distance. We have proceeded thus far with the supposition that the weight of the ball and that of the bars were applied to produce motion in the wheels, though in opposite directions. Let us suppose that the bars are void of weight, and that the weight of the ball alone is applied to the wheels. In this case a direct force is applied to the wheel, and thence communicated to the vertical bar, thus converting a rotary to a rectilinear motion. It will now appear that a force much greater than the weight of the ball is exerted on the vertical bar during the first part of its progress; but this force gradually diminishes till the ball arrives opposite K, at which point the force on the bar is nearly one-third less than the said weight. From this point, the force increases till the ball reaches N, when the motion of the bar is reversed, and moves with equal force upward. The average force, however, applied to the bar is precisely equal to the weight of the ball. It appears evident that the erroneous opinions entertained on the subject of the crank motion, have generally originated in the neglect of the consideration, that the crank pivot has a greater distance to travel in performing a revolution, than the whole extent of the rectilinear motion which is ordinarily produced thereby.

(To be continued.)

Geological Gleanings in Mississippi.

(Continued from No. 44.)

These ravines are destitute of sand and gravel, and the very few small boulders that occur lead to the conclusion that they were not deposited there by diluvial action. One ravine which discharges itself into the low grounds near the mouth of Fairchild's creek is remarkable for the number of concretionary formations, very irregular in form and of large size, composed of lime and clay, usually termed clay stones: and for a singular circular basin of at least ten acres in extent, formed about half a mile below its head by the subsidence of the earth leaving on the southern margin a perpendicular bluff of about fifty feet. This basin is similar in the manner of formation to those larger and more remarkable depressions in the bluff a mile or two above Natchez, known as the Punch Bowls. Here a perpendicular subsidence of more than a hundred feet has taken place, forming a series of semicircular indentations, the bottoms covered with trees, the tops of which fall short of the altitude of the original surface level.

Similar depressions are seen along the Yazoo valley, and doubtless at other points in the bluff range.

From the verge of these basins extensive views are afforded of the river and low grounds, and embracing in the distance the high lands on the Onachetta river, in Louisiana.

Pine ridge, the principal site of the large ravines, presents another remarkable and anomalous feature in the topography of the State, which has often attracted observation, and been referred to by early geographers in their descriptions of this country. It is the occurrence of the pine timber of the largest size, of the short leaf variety, liberally interspersed over a space of several miles, among timber growing only in a deep and rich soil, such as walnut, poplar, linn, and magnolia; extending over the ridge, dividing the waters of Fairchild's and St. Catherine, to which it has given its characteristic name.

The pine is seen from the river surmounting the bluff below the mouth of Fairchild's creek and at the Punch Bowls. Receding from the river, it preserves a continuous chain eastwardly by Selserstown, across Cole's creek, and connecting with the pine forests beyond.

The White Cliffs, the first bluffs occurring above Fort Adams, are composed chiefly of clays, variously colored, and of sand; large deposites of the latter being found pure and white.

A few pines of inferior growth embellish the summits, and in connection with the peculiar castellated and tower like form of some sections of the cliffs, occasioned by the chasms or fissures cut through the loose unconsolidated materials of which they are composed, render this, when viewed from the water, the most picturesque highland on the river within the State.

At extreme low water the base of the cliffs is laid bare, exposing a clay sloping be the composed of colored clays and beds of ochre, over which lies in many places a thin lamina of iron ore, assuming a nodular and frequently a dendritic or arborescent form. Near the principal deposite of yellow ochre, large cylindrical masses of iron stone occur, partly grouped, or arranged not unlike the pipes of an organ, overthrown and broken; others exhibiting a similitude to pieces of ordnance, double chambered, and presenting in some of the tubes a calibre of several inches. On the beach are also found many logs and fragments of wood converted into stone. Some of these are of large dimensions. Part of the trunk of a sycamore, with the grain and texture of the wood distinctly characterized, is about eight feet long and two feet in diameter. The late Mr. Dunbar, in describing these cliffs in 1804, says that small springs possessing a petrifying property, flow over this beach, from which it may be inferred that he attributed the change wrought in these specimens to that cause. If they are to be considered erratic, or referred to diluvial agency, they are certainly unaccompanied by boulders of corresponding dimensions; few are found near them, and those mere pebbles; indeed, even gravel is absent in this formation in a remarkable degree.

The yellow ochre found here is said to be of excellent quality, and to exist in such quantity that several vessels were freighted with it about the period of the embargo which preceded the late war of 1812, by a merchant of Boston.

The boating of sand, also, furnishes a regular business, New Orleans deriving a considerable supply from this place.

It is thought to be adapted to the manufacture of glass, and will doubtless in time be so employed. The cliffs afford also potters clay in inexhaustible quantities, and among other purposes, it is said to have been employed in the composition of tiles, used extensively in New Orleans. It is in contemplation also to employ it in the manufacture of fire brick, for which purpose it has been found to be well suited.

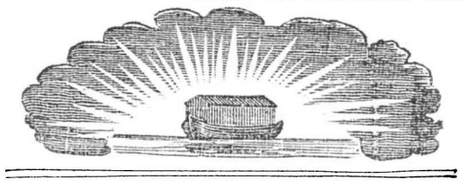
Next in order ascending occur the Natchez bluffs. The sand in these is more feruginous, and intermixed with gravel and pebbles. A variety of plastic clays occur here also in considerable masses, and are disseminated also in smaller quantities through the sand.

It has been found to be an excellent material for modelling, for which purpose it has been employed in the city of Natchez by an ingenious and skilful artist.

The gravel predominates greatly near the base, and perhaps does not extend more than twenty or thirty feet above it.

Near the summit, a few feet below the surface, a concretionary strata is seen presenting a thin range of clay stones, varying in form in different sections of the bluff. Lime enters to a considerable degree into the composition of these concretions. They are found strown over the beach which at low water is exposed to considerable extent, and is covered with coarse gravel and boulders of larger size than is met with in any other locality on the river.

(To be continued.)



The Millerites.

(Continued from No. 44.)

Having presented in preceding numbers, a brief epitome of the arguments advanced by this singular and "wondered at" class or sect, showing that Paganism was generally suppressed and Papacy established in its place in A. D. 511; that great power and authority were given to Papacy in 541, and that in 1801,—1290 from the former and 1260 years from the latter date,—its power and dominion were taken away; and that consequently the 1335 days of Daniel 12:12, as well as the 2300 days of Dan. 8:14, must terminate in 1846, we shall close the subject with a specimen of their arguments on the importance and propriety of giving special attention to this subject. It is contended that all the calamities and misery which have befallen the Jewish nation within the last 1800 years, and which according to the sentence, was to be perpetual, are directly attributable to their neglect of attending to the prophetic scriptures, and consequent ignorance concerning the *time* and manner of the first coming of Christ; and that if the Jews had obeyed the repeated injunctions to study diligently the law and the prophets, especially concerning the times and the signs of the first advent, they would have known that Jesus was the Christ, and would have been greatly blessed as a nation; and it is believed by some that the kingdom of God would have been set up on the earth in those days. That the Jews would have been greatly blessed is evident from what was said to them by our Lord when he beheld Jerusalem and wept over it, saying "O, Jerusalem, if thou hadst *known*. even in this thy day, the things that belong unto thy peace;" and expressed a will to gather them—that is, those that were scattered among the nations,—as a hen gathers her brood under her wings. In several instances, he reproved them because they had not attended to the prophesies, in which the precise time of his appearing was made sufficiently plain, and whereby they might have known that he was the promised Messiah. He expostulated with them on the propriety of exercising their reason and judgment in this matter; reminding them that they could presage changes in the weather by the appearance of certain signs, and enquires, "how is it that ye cannot discern this time." And it is contended that there are no less imperative injunctions,—no less propriety or necessity for people to learn and understand the prophecies concerning the time of the second advent of Christ, than there were of knowing the time of his first coming; for the same class of prophecies which foretold the time and signs of the first advent, also, with at least equal clearness, have designated those of the second. And that if the Jewish nation fell under perpetual condemnation in consequence of not knowing the *time* of its visitation, those who in these times, and having the sacred scriptures plainly printed, and accessible to all, and this example of the rejection of the Jews, before them, still persist in treating the whole subject with indifference and neglect, can not expect to escape a more severe and hopeless condemnation. There are many injunctions in the new testament, either direct or implied, for believers to look for the coming of Christ, hasten it, wait for it, and *love* his appearing: and utterly hopeless is represented the condition of those who should be taken by surprise;—on whom the day of the Lord shall come as a thief, and who should not know the time of his coming.

But it is said that as the Jews had priests and pharisees, who, being proud and loving the honors of this world, assumed to possess all the requisite knowledge of divinity, and taught the people many things which had no authority in the scriptures of truth, and blinded the minds of the people on the subject of the first appearance of the Messiah; so there are now popular clergymen and doctors of divinity,—(men of the world, who are not willing that Christ should come, lest they should lose the dignity and authority which they now enjoy,) to whom the people give heed, instead of studying the scriptures with prayer to understand them. The pharisees contended that it was not time for Christ to appear, because "Elias must first come;" and that Jesus could not be the Christ, because he came out of Gallilee. They now contend that there must first be a millenium—a thousand years of righteousness: and moreover, that men have no right to know any thing about the time, because it was said by the Lord when he was on earth, that "of that day and hour knoweth no man," notwithstanding that he had just before said, in allusion to the prophecies of Daniel, "whoso readeth, *let him understand*," and "when ye see these things begin to come to pass, then *know* that it is near." So argue these Millerites; and they hold moreover, that those who say that "it is not essential for us to know the time if we are prepared for the event," evince by that very remark, that they—the authors thereof—are *not* prepared for that glorious event. For any person who has the genuine love of Christ, can not be otherwise than solicitous (as was Daniel) to know as much as possible about the time of his appearing:" and this idea is also expressed by several of the apostles. Therefore, let him who feels indifferent, be alarmed; and "let him who thinketh he standeth, take heed lest he fall."

HAPPINESS IN DEATH.—As one said to Philip J. Jenks, just before he expired, "How hard it is to die," he replied, Oh no! easy dying, blessed dying, glorious dying." Looking up at the clock, he said, "I have experienced more happiness in dying two hours this day, than in my whole life, It is worth living for; it is worth a whole life to have such an end as this. I have long desired that I might glorify God in my death, but O! I never thought that such a poor worm as I could come to such a glorious death."

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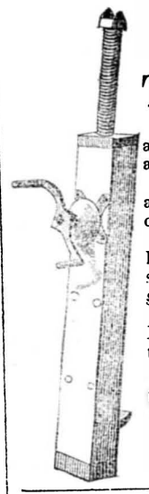

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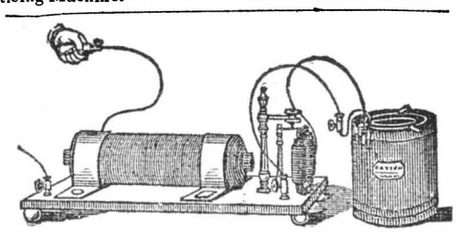

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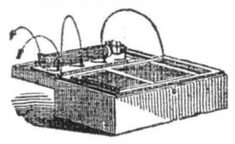

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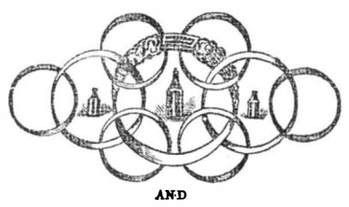

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This remarkable invention, which has received the almost universal approbation of the medical profession of Great Britain, comprises an entirely new application of Galvanism, as a remedial agent, by means of which the ordinary Galvanic Batteries, Electric and Magnetic machines, &c., are entirely dispensed with, and the mysterious power of Galvanism applied without any of the objections which are inseparable from the general mode how in use. The strong doses, and at irregular intervals, in which Galvanism is applied by the machines, has been pronounced, after a fair and impartial trial, to be *decidedly injurious*, and it was to remedy this radical defect that this new application was projected, which, after unceasing toil and perseverance, has been brought to its present state of perfection. The Galvanic Rings answer all the purposes of the most expensive machines, and in many other respects are more SAFE and CERTAIN in accomplishing the desired object.

The Galvanic Rings have been used with entire success in all cases of Rheumatism, acute or chronic, applying to the head, face or limbs; gout, tic-doloreux, toothache, bronchitis, vertigo, nervous or sick headache, indigestion, paralysis, palsy, epilepsy, fits, cramp, palpitation of the heart, apoplexy, stiffness of joints, spinal complaints, lumbago, neu algia, nervous tremors, dizziness of the head, pains in the chest and side, general debility deficiency of Nervous and physical energy, and all nervous disorders.

In cases of confirmed dyspepsia, which is simply a nervous derangement of the digestive organs, they have been found equally successful. Their extraordinary effects upon the system must be witnessed to be believed, and as a certain preventive for the preceding complaints they are equally recommended. The Rings are of different prices, being made of all sizes, and of various ornamental patterns, and can be worn by the most delicate female without the slightest inconvenience. In fact, the sensation is rather agreeable than otherwise.

The Galvanic Belts, Bracelets, Bands, Garters, Necklaces, &c.

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Christie's Magnetic Fluid

Is used in connection with the Galvanic Rings, and all their modifications. This composition has been pronounced by the French Chemists to be one of the most extraordinary discoveries of modern science. It is believed to possess the remarkable power of rendering the nerves sensitive to galvanic action, by this means causing a circulation of the influence at the seat of disease, and thus giving rapid and permanent relief. No other composition in chemistry is known to produce the same effect or to impart a similar property to the nervous system by means of an outward local application. The Magnetic Fluid contains nothing capable of the slightest injury, its application is agreeable, and it is as harmless in its action as it is beneficial in its result. Full explanations and directions accompany it. The combined inventions are in every way perfectly harmless; they are at prices within reach of all, and the discoverer only requests a fair trial, as a test of their surprising efficacy and permanent benefit.

☞ The great celebrity and success of CHRISTIE'S Galvanic and Magnetic Curatives, has caused them to be counterfeited by unprincipled persons. The public are therefore cautioned to beware of all imitations. Dr. Christie has but one authorised Agent in each city of the Union. The only Agency in New York is at

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*** A liberal discount is made to purchasers of these articles for places where there is no established agent. A new book on "Galvanism and its Application as a Remedial Agent," may be had, *gratis*, at the General Agency, 182 Broadway. june25.

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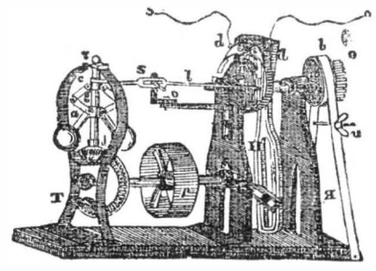

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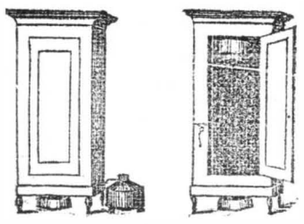

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